

# **Analysis of the elementary excitations in high-Tc cuprates: Explanation of the new energy scale observed by angle-resolved photoemission spectroscopy**

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## **Abstract**

Analysis of the energy and momentum dependence of elementary excitations in high-Tc cuprates were performed. The elementary excitations in high-Tc superconductors were the result of the coupling to spin fluctuations. The kink in the angle-resolved photoemission spectroscopy experiments were explained by characteristic features in the spectral density as a result of the energy dependence of the self-energy.

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